

**CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT**

**PURCHASE SPECIFICATION**

**FOR**

**SIX TERMINAL, INSTRUMENT TRANSFORMER RATED, SINGLE PHASE METER SOCKET WITH PRE-WIRED TEST SWITCH**

<b>DATE</b>	<b>PREPARED BY</b>	<b>ISSUANCE/REVISION</b>	<b>APPROVAL PROCESS MANAGER/STD. SUPV.</b>
01/30/76		Issuance	
04/21/99	Herman Millican	Revision	
07/13/2010	Carlos Tello	Revision	
04/11/2016	Abdur Rahman, P.E.	Revision	
07/22/2020	Abdur Rahman, P.E.	Revision	<i>Scott Larson</i>

<b>REASON FOR REVISION</b>	<b>AFFECTED PARAGRAPHS</b>
Remove letter indentation requirement	5.1.1
Add internal wiring space requirement	5.1.7
Add return jumper wire requirement	5.2.8
Add test plug allowance requirement	5.2.9
Update business unit name	5.2.2

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein.  
Retain for future reference.

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**FOR**  
**SIX TERMINAL, INSTRUMENT TRANSFORMER RATED, SINGLE PHASE METER**  
**SOCKET WITH PRE-WIRED TEST SWITCH**

**1.0 SCOPE & CLASSIFICATIONS**

- 1.1 This specification covers the classification, applicable standards, functional requirements, wiring, and performance requirements of six terminal, transformer rated, single-phase meter sockets with pre-wired test switches.
- 1.2 No deviation from this specification on the part of the bidder will be allowed. Any items supplied under this specification not in compliance with this specification shall be unacceptable.

**2.0 APPLICABLE SPECIFICATIONS**

- 2.1 The equipment furnished under this specification shall be manufactured and tested in accordance with current ASTM, NEMA and ANSI (C12.7 - Requirements for Watthour Meter Sockets and C12.9 - Test Switches for Transformer Rated Meters).

**3.0 FUNCTIONAL REQUIREMENTS**

- 3.1 The meter enclosures under this specification shall be used to protect metering connections in electric service installations for transformer rated meters.

**4.0 PERFORMANCE REQUIREMENTS**

- 4.1 The meter socket and test switch shall have, at minimal, 20 ampere, 600-volt capacity.
- 4.2 Test switch shall be wired to meter socket with AWG No. 12 copper (solid or stranded) wire and color coded in accordance with Section 5.2.2.
- 4.3 Wiring will be neat with 90-degree bends and tie-wrapped.

**5.0 MATERIAL REQUIREMENTS**

5.1 Meter Socket

- 5.1.1 All enclosures shall be 16 gage galvanized steel or 14 gage aluminum with baked on gray finish.
- 5.1.2 All enclosures shall have insulating materials of rosite, Phenalic, fiberglass, or equivalent non-tracking material rated 600 volts. (Ceramic material not acceptable.)
- 5.1.3 Terminals shall be tin plated copper sleeve type connectors compatible with aluminum or copper lugs and will accommodate AWG No. 14 through No. 4 wire.
- 5.1.4 Knockouts shall be concentric. At least one 1", 1 1/4" and 1 1/2" on each side, at bottom, and at back and 1/4", 1/2" ground at bottom.
- 5.1.5 All enclosures shall have test switch below meter.
- 5.1.6 All enclosures shall have a one-piece raintight ringless cover, with latch and approved sealing means for padlock type seal.
- 5.1.7 Minimum outside dimensions of the enclosure shall be sufficient to provide ample room for the distribution of the maximum-size conductors for which the socket is intended. Internal

wiring space shall be sufficient to allow line and/or load conductors to enter through either end of the enclosure for routing to the proper terminal.

5.2 Test Switch

5.2.1 Standard test switches shall be six poles.

5.2.2 All test switch arrangements and color coding of handles and wiring shall be as follows:

Phase Arrangements	Switch Handle Color Code	Switch Pole No. (Left to Right)	Wiring Color Code Between Switch And Socket
Voltage(AØ)	Orange	1	Orange
Current (AØ)	Red	2	Red
Current Return(AØ)	White	3	Red
Current(BØ)	Black	8	Black
Current Return(BØ)	White	9	Black
Voltage(BØ)	Yellow	10	Yellow

5.2.3 All test switches shall have insulating barriers adjacent to the voltage switches. All copper parts will be nickel-plated.

5.2.4 Each double-pole, short-circuiting current switch shall be so designed as to permit the insertion of a test plug.

5.2.5 Test switches shall be provided with wiring terminals for the connection of AWG No. 12 secondary conductors with facilities for attaching test clips provided on the terminals.

5.2.6 Test switchblade hinges shall be held in place by locknuts or pins so arranged that a firm and secure connection would be maintained at any position on the switchblade.

5.2.7 Test switch cover shall be made of Lexan or fiberglass, and shall be held in place by cover studs 1/4 x 20. Studs shall have suitable provisions for sealing. When test switch cover is in place, all switches shall be in a closed position and socket cover can be sealed.

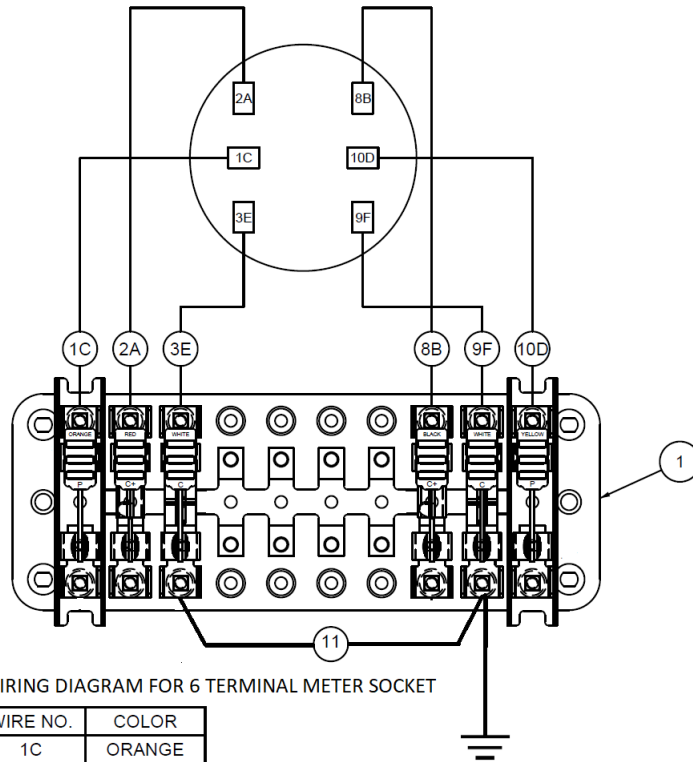
5.2.8 Return jumper wire shall be installed between positions 2-4. Ground wire shall be connected to position 4 of test switch.

5.2.9 Each double pole current switch shall be designed such that a universal test plug shunt may be inserted.

6.0 DESIGN DRAWINGS

6.1 The Vendor shall provide AE Advanced Metering Systems & Engineering, at the beginning of each year in the month of January, drawings for all applicable meter sockets regardless of whether revisions have been made to the drawings. Failure to provide these drawings will result in the rejection of the Vendor from the Qualified Products List (QPL).

6.2 The Vendor shall provide revised drawings to AE Advanced Metering Systems & Engineering as soon as the drawings are revised.



WIRING DIAGRAM FOR 6 TERMINAL METER SOCKET

WIRE NO.	COLOR
1C	ORANGE
2A	RED
3E	RED
8B	BLACK
9F	BLACK
10D	YELLOW
11	WHITE

NOTES:

- 1.) ALL WIRES TO BE #12 STRANDED COPPER AND COLOR CODED INSULATION AS INDICATED.